

$$f(n) = 3^{An+B}$$

$$y = x^2$$

$$(1, 1) \rightarrow 3^{A+B} = 1 \rightarrow B = -A$$

$$(3, 9) \rightarrow 3^{3A-A} = 9 \rightarrow A = 1$$

$$\rightarrow f(n) = 3^{n-1} \xrightarrow{n=0} 3^{-1} = \frac{1}{3}$$

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$$\log_r (r^n + 15) = n + 3 \rightarrow r^{(n+3)} = r^n + 15$$

$$\rightarrow \wedge \times r^n = r^{2n} + 15 \xrightarrow{r^n = t} t^2 - \wedge t + 15 = 0 \begin{cases} t = 3 \\ t = 5 \end{cases}$$

$$\begin{aligned} \rightarrow r^{n_1} = 3 &\rightarrow n_1 = \log_r 3 \\ \rightarrow r^{n_2} = 5 &\rightarrow n_2 = \log_r 5 \end{aligned} \rightarrow n_1 + n_2 = \log_r 15$$

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$$(\log_{r_1}^3)^r + \log_{r_1}^{(1fr)} \log_{r_1}^{(1rfr)} = (\log_{r_1}^3)^r + (\log_{r_1}^r + 1)(\log_{r_1}^r + 2)$$

$$\xrightarrow{\log_{r_1}^r = t} t^r + (1-t+1)(t+2) = t^r + (r-t) = r$$

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$$\log(n^2 - 2n + 1) + 3 \log(1-n) = 2$$

$$\log_r^{(-n)} = 3$$

$$10^2 = (n-1)^2 (1-n)^3 \rightarrow n = -9$$

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$$\rightarrow \log_3 9 = 2$$

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$$\log_r (n^2 + 2n + 4) + \log_r (n-2) = 3$$

$$\log_{\frac{r}{\sqrt{r}}}^n$$

$$\rightarrow r^3 = (n^2 + 2n + 4)(n-2) = n^3 - 2^3$$

$$\rightarrow n^3 = 14 \rightarrow n = \sqrt[3]{14} \rightarrow \log_{\frac{\sqrt{14}}{\sqrt{r}}}^n = 3$$

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$$\log(r-n) - \log \frac{1}{(n-r)r} = r$$

$$\log \frac{(r-n)}{\sqrt{r}}$$

~~$$\log \frac{r-n}{(n-r)r} = \frac{1}{n-r} = \frac{1}{r-n} \rightarrow r-n = 10^r$$~~

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$$10^r = (r-n)(n-r)r = (r-n)^2$$

$$\rightarrow n = -1 \rightarrow \log \frac{1}{\sqrt{r}} = r \log \frac{1}{r} = 9$$

$$r n^{r-1} = r^n \rightarrow n^{r-1} - r n - r = 0 \rightarrow n = \frac{r \pm \sqrt{14r + 1}}{r}$$

$$\rightarrow n = r \pm \sqrt{r} \rightarrow r + \sqrt{r}$$

$$\rightarrow \log \frac{(n-r)}{4} = \log \frac{\sqrt{r}}{4} = \frac{1}{r}$$

$$\log_r r = \frac{\Delta}{\Delta} \quad \log_{11} 1 = ?$$

$$\rightarrow \log_r r = \frac{\Delta}{\Delta} \quad , \quad \log_{11} 1 = \log_{r^r} r^r = \frac{1}{r} (r \log_r r + 1)$$

$$\rightarrow = \frac{1}{r} \left( \frac{14}{\Delta} + 1 \right) \frac{11}{\Delta} = \frac{1}{\Delta} \rightarrow \log_{11} 1 = \frac{\Delta}{11}$$

$$\log_r r = 0, 11$$

$$\log_{11} 4 = \log_{r^r} r^r$$

$$\rightarrow \log_r r = 1, 4 \quad , \quad \log_{11} 4 = 1 + \log_r 4$$

$$\rightarrow \log_r 4 = 1 + \log_r r = 2, 4 \rightarrow \log_{11} 4 = \frac{\Delta}{11} \rightarrow \log_{11} 4 = \frac{11}{11}$$

$$\rightarrow \log_{11} 4 = \frac{11}{11}$$

$$(a \log r) n^r + a n + b \log r = 0$$

$$r \frac{a}{a} = -\frac{c}{a} = -\frac{b \log r}{a \log r}$$

$$\rightarrow S = +\frac{b}{a} + 1 = -\frac{a}{a \log r} \rightarrow \frac{b}{a} + 1 = \log_{10} 10$$

$$\rightarrow \frac{b}{a} = \log_r \Delta \rightarrow (\sqrt{r})^{\frac{b}{a}} = (\sqrt{r})^{\log_r \Delta}$$

$$\rightarrow = (\Delta)^{\log_r \sqrt{r}} = \Delta^{\frac{1}{r}} = \sqrt{\Delta}$$